

2016-17 SQUIRREL HUNTING COOPERATOR SURVEY REPORT



KENTUCKY DEPARTMENT OF FISH AND WILDLIFE RESOURCES

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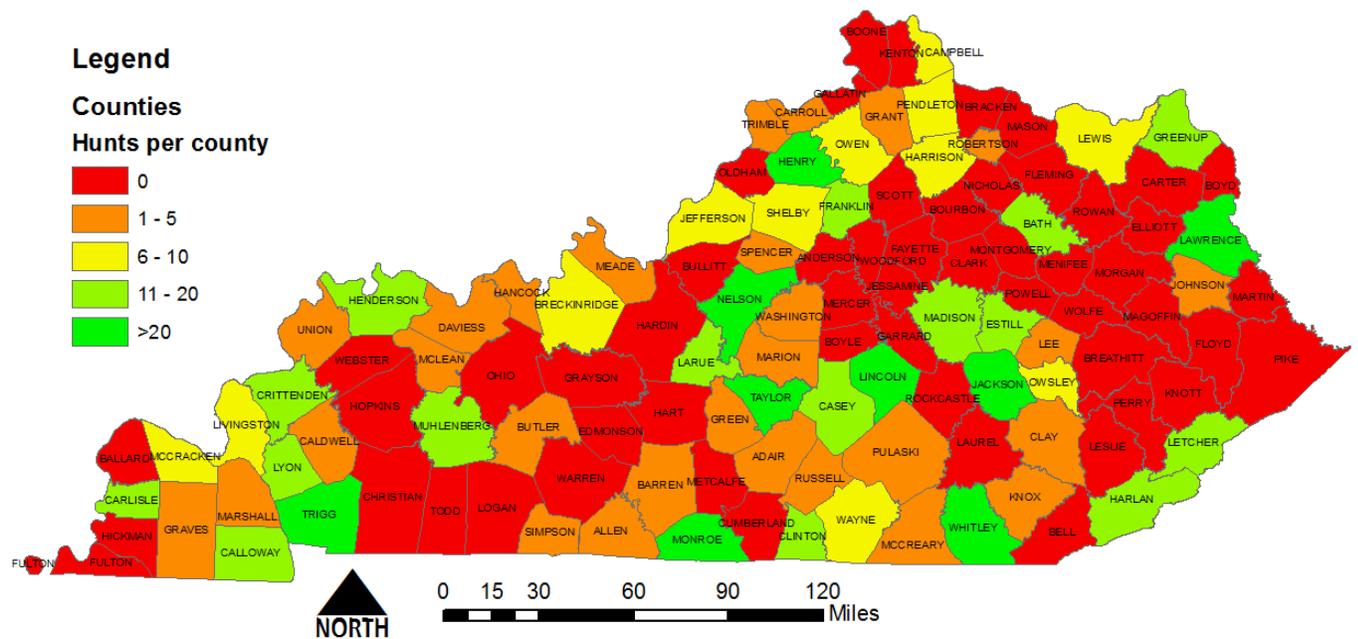
Thank you to all the hunter cooperators who sent in hunting logs for the Fall Squirrel Hunting Cooperator Survey. Your efforts are appreciated, and we encourage you to continue sending in your hunting logs. Encourage your hunting buddies to do the same! Survey participation has been decreasing over the past few years so be sure to recruit your friends. The following report will cover the results of last season's (2016-17) Fall Squirrel Hunting Cooperator Survey and the 2016 Mast Survey. Last season's harvest and hunting effort totals are included as well as the current population trends, along with an outlook for the upcoming season.

I. 2016-17 Fall Squirrel Hunter Cooperator Survey

The squirrel survey was developed in 1995 as a voluntary initiative. Hunters are asked to record data including date of hunt, county hunted, hours hunted, number of hunters, number of dogs, and number of fox & gray squirrels (seen, killed, and wounded), on a diary-type hunting log. Logs are available on the internet: <http://fw.ky.gov/Hunt/Pages/Game-Species.aspx> or by calling **1-800-858-1549**. Hunters simply keep the log up-to-date as the hunting season progresses, and mail it to Kentucky Department of Fish and Wildlife (KDFWR) Headquarters when they're finished hunting for the season. Data collected from the survey gives the KDFWR information that can be used to monitor squirrel population trends in Kentucky and better serve the hunters of the state. Each year participating hunter cooperators are mailed a new hunting log, the results of the survey, and a small gift. Hunters who wish to receive a copy of their log from the previous year may call 800-858-1549 ext. 4521 or e-mail cody.rhoden@ky.gov.

Summary of Last Year's Hunter Logs

Participation has been decreasing over the last several years, with a sharp decline this last hunting season. Please take a look at the below map, if you hunt in any of the red counties please consider filling out a hunting log this year (even if you do not harvest any game). Once again, don't forget to mail in your log and encourage other squirrel hunters to do the same. Why not take someone new hunting this year? The future of hunting depends on it.



2016-17 Overview:

- Logs were received from 59 hunters (a 27% decrease from last year)
- Hunters averaged 10.9 hunting trips throughout the season.
- 21% of hunts included the use of dogs.
- Average hunt lasted 2.9 hours.
- Data was provided from 646 hunts.
- Data was provided from 65 counties across Kentucky.
- Central Region = 319 hunts East Region = 185 hunts West Region = 142 hunts
(see Appendix A for regional map)
- Hunters saw an average of 4.0 squirrels per **hunt**.
- Hunters saw an average of 1.4 squirrels per **hour**.

The number of squirrels seen and killed by hunters decreased as the season progressed (Figure 1).

- Hunters saw an average of 3.5 gray squirrels per hunt and 0.5 fox squirrels per hunt.
- Hunters saw an average of 1.2 gray squirrels per hour and 0.2 fox squirrels per hour.

Figure 1: Squirrels Seen and Killed per Hour: Fall 2016-17

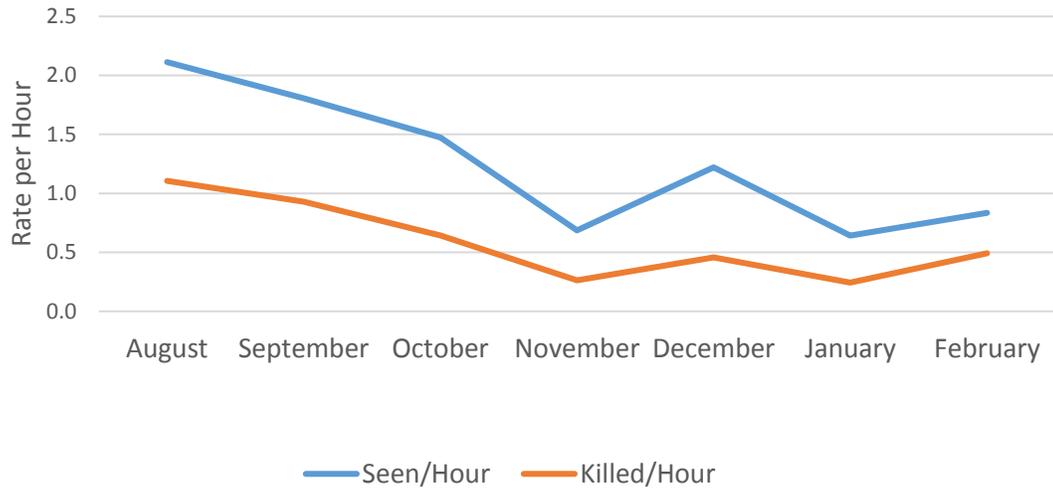


Figure 2 shows the long-term trend for the number of gray and fox squirrels seen per hour.

Figure 2: Squirrels Seen per Hour: Fall Season 1998-2016

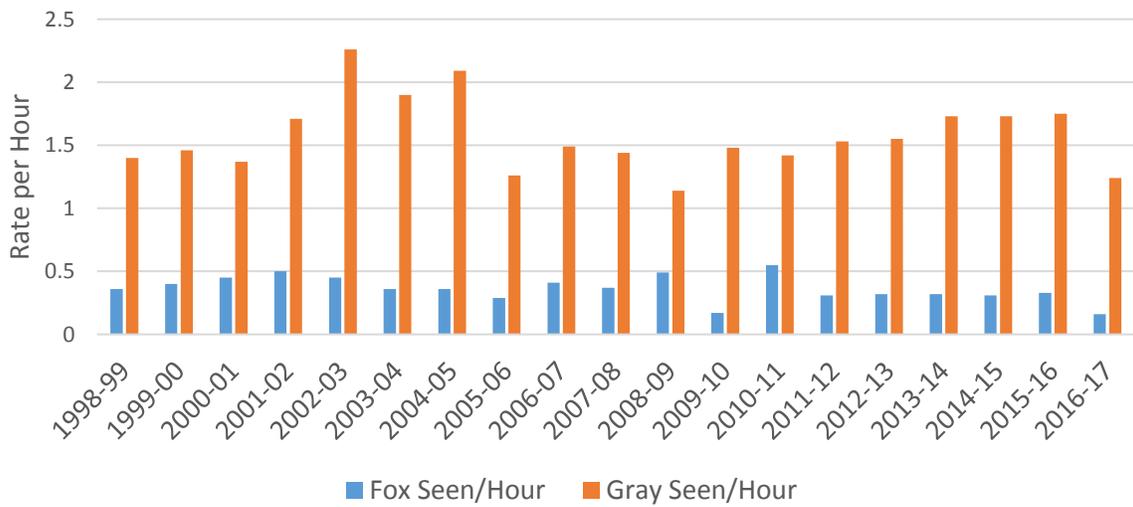


Table 2. Summary of Fall Squirrel Hunter Cooperator Survey data; 2010-2016 squirrel season.

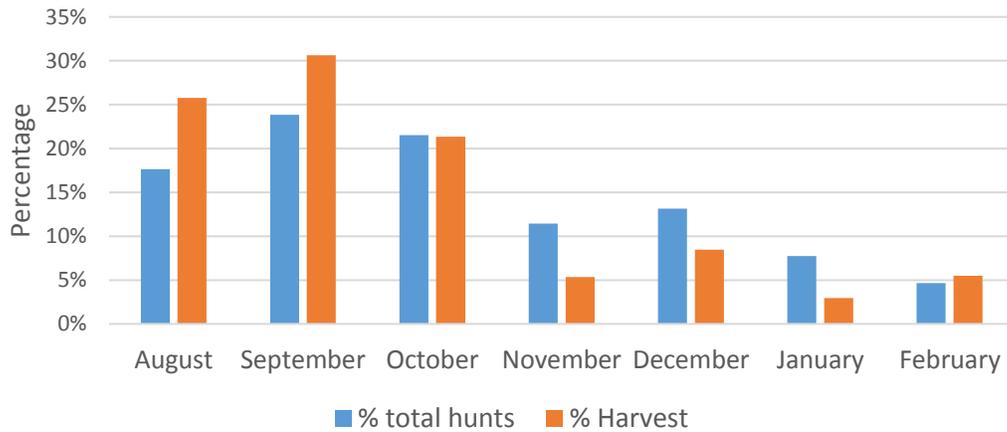
<i>STATISTICS</i>	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
<i>Total cooperators</i>	97	85	83	81	86	81	59
<i>Total hunts</i>	1134	1144	1123	1077	1079	1101	646
<i>Total counties</i>	82	76	69	72	73	70	65
<i>Average hunts/cooperator</i>	11.6	13.3	13.5	13.2	12.5	13.6	10.9
<i>Total hours</i>	2946	3063	3319	3097	3016	3017	1847
<i>Hunts using dogs (%)</i>	14.4	13.0	13.8	17.6	20.4	24.3	20.7
<i>Total fox squirrels seen</i>	1625	947	1053	1005	929	994	288
<i>Total fox squirrels killed</i>	818	487	550	533	473	492	152
<i>Total fox squirrels wounded</i>	52	40	39	35	31	23	7
<i>Total gray squirrels seen</i>	4184	4684	5145	5342	5213	5275	2286
<i>Total gray squirrels killed</i>	1895	2315	2389	2561	2451	2654	1066
<i>Total gray squirrels wounded</i>	153	177	227	185	164	156	64
<i>Harvest of squirrels seen (%)</i>	46.7	49.7	47.4	48.7	50.7	50.2	47.3
<i>Squirrels wounded (%)</i>	3.5	3.8	4.3	3.4	3.1	2.9	2.75
<i>Hunting mortality (%)</i>	50.2	53.6	51.7	52.2	53.8	53.1	50.1

Hunter Effort

Hunting effort was greater towards the beginning of squirrel season. Forty one percent of the hunts took place in August and September (Figure 3).

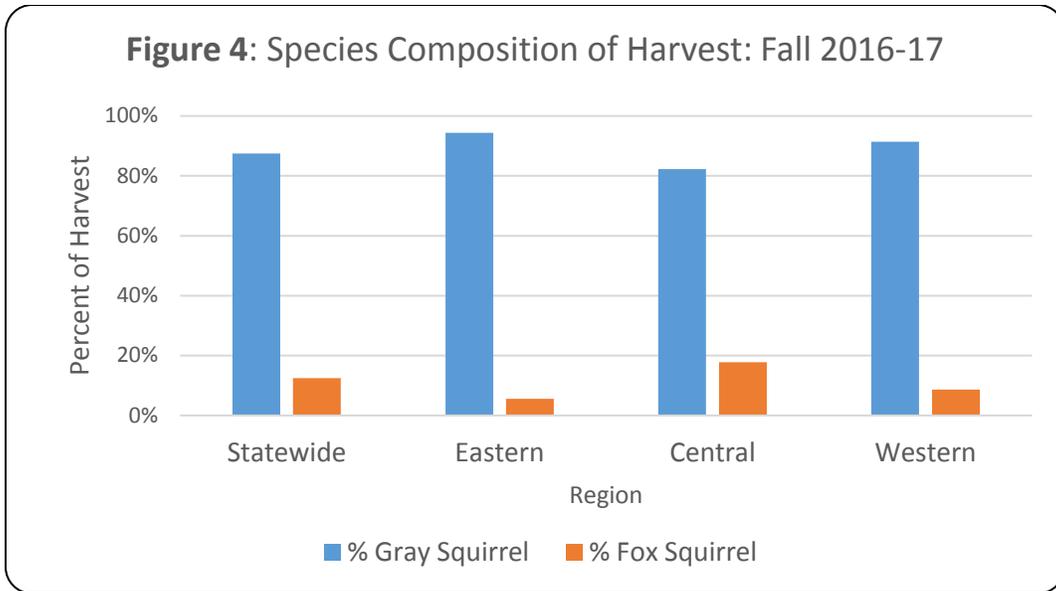
The hunter effort index declined as the season progressed, and squirrel-hunting trips were rare in January and February. Squirrel hunting is one of a few seasons open in August and September, and later season opening dates for deer, waterfowl, rabbit, grouse, and quail may account for the greater hunting effort taking place towards the beginning of squirrel season. The percentage of hunts dropped beginning in November, with only 11% of the total hunts occurring in this month. The drop in hunting rate was likely a direct result of the onset of deer gun season. Historical Hunter Cooperator data shows a similar trend.

**Figure 3: Percentage of Hunts & Harvest by Month:
Fall 2016-17**



Harvest

- Hunters harvested 47.3% of squirrels seen and wounded 2.75%. Assuming wounded squirrels did not survive, the hunting mortality rate was 50.1% of squirrels seen in 2016-17.
- Statewide, 88% of the harvest was comprised of gray squirrels (Figure 4). The rate suggests Kentucky squirrel hunters prefer hunting in more extensive forests and woodlands, common to gray squirrels, than small woodlots and fencerow-type habitats where fox squirrels are often found. It also demonstrates that gray squirrels are more abundant than fox squirrels.



II. 2016 Mast Survey Results

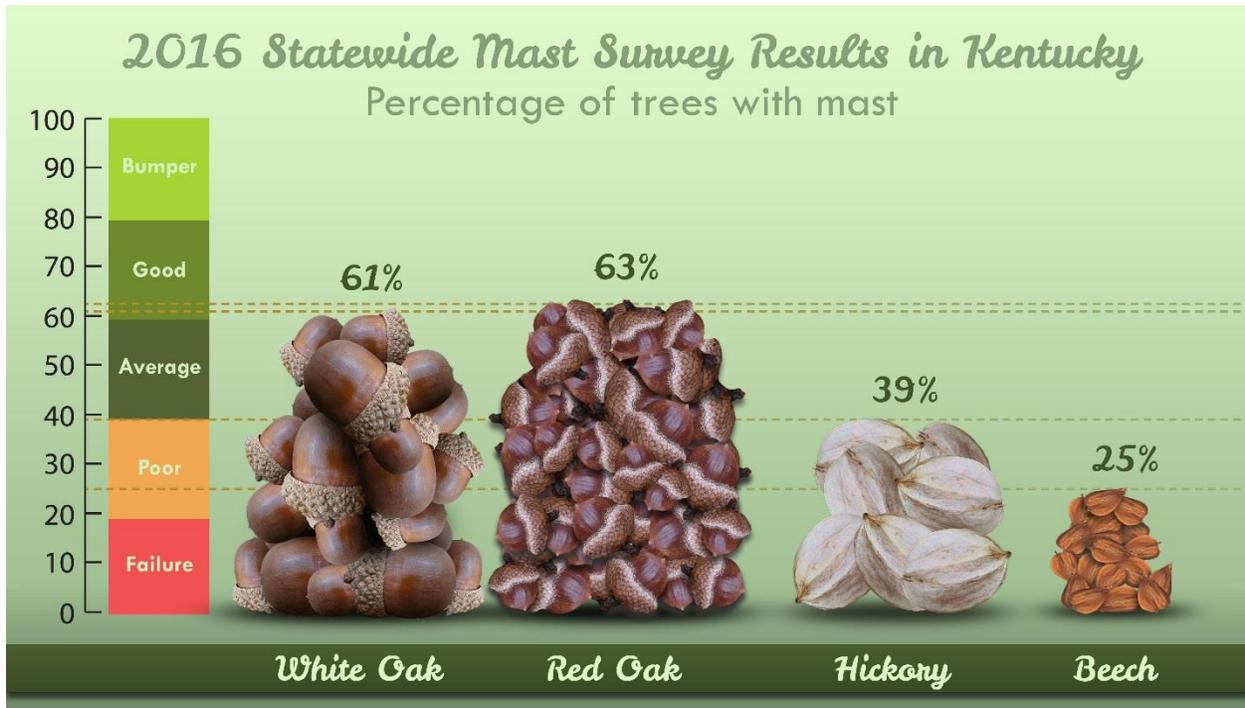
A statewide mast production survey of Kentucky's most important producers of wildlife foods was initiated in 1953 and has been conducted annually thereafter. A close relationship has been found between a given year's mast production and the following year's squirrel population level statewide. The mast survey looks at the 3 primary mast producing tree groups (hickories, red oaks, and white oaks) with American beech being the only individual species surveyed.

Summary of the Survey

The chart (mast results) shows the proportion of trees bearing acorns (PBA) or other mast across Kentucky. As an example, 61% listed in the white oak column means that for every white oak tree surveyed in Kentucky in 2016, an average of 61% of those trees contained acorns. Statewide, mast production in 2016 was good for white and red oak trees. Hickory and beech trees were poor at 39% and 25% respectively.

Statewide

Mast Results:



III. 2017-18 Fall Squirrel Hunt Forecast

The 2016 mast crop was rated “good” for white and red oak. Beech and hickory trees produced less this year compared to last year. Without a doubt, Kentucky’s forests were well stocked with food last fall and winter. This falls squirrel hunting should be fantastic! Last year, hunters saw an average of 1.4 squirrels per hour. This was down from the previous season of 2.1 squirrels seen per hour. This was likely due to the fact that there was a lot of mast locally available for squirrels which resulted in less required movement for the animals on a daily basis to find nuts to eat and cache. With the squirrels moving less, there was potentially less of an opportunity to encounter/harvest animals compared to years in which the mast was not rated as highly as in 2015. Winter was quite mild overall and coupling that with abundant mast is setting the stage for a banner year in the 2017-18 hunting season.

Don't forget to turn in your Hunter Cooperator log at the completion of this year's hunt. **Logs should be returned no later than March 31, 2018.** In return we'll send you a report and a small gift as a token of our appreciation.

Encourage all of your friends to log their hunts as well. Have a safe and enjoyable squirrel season and thanks again for your support! And don't forget to take someone new to hunting out with you this year.

Appendix A. Mast and squirrel data collection regions in Kentucky.

